Autologous Induced Pluripotent Stem Cell-Derived Neurons to Treat Parkinson's Disease.

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Public Summary:

In 2012, we planned a program to develop a neuron replacement therapy for Parkinson's disease (PD) that would have the greatest promise to help the patients. PD is a movement disorder caused by the progressive, inevitable loss of a specific type of dopamine neuron in the brain. The only viable treatment to reverse the progress of the disease is to replace those neurons; we decided to make dopamine neurons that matched the patients, by differentiating induced pluripotent stem cells that we generated from individuals with PD. This autologous cell therapy is entering the regulatory approval process this year with the U.S. Food and Drug Administration to begin to transplant the cells in the following 1 to 2 years.

Scientific Abstract:

In 2012, we planned a program to develop a neuron replacement therapy for Parkinson's disease (PD) that would have the greatest promise to help the patients. PD is a movement disorder caused by the progressive, inevitable loss of a specific type of dopamine neuron in the brain. The only viable treatment to reverse the progress of the disease is to replace those neurons; we decided to make dopamine neurons that matched the patients, by differentiating induced pluripotent stem cells that we generated from individuals with PD. This autologous cell therapy is entering the regulatory approval process this year with the U.S. Food and Drug Administration to begin to transplant the cells in the following 1 to 2 years.

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